Lista 05 Exercício Prático

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Experiência 1

		i = i op 3	i = i op 3	i = i op 3	i = i op j	i = i op j	i = i op j
Tipo	Tempo Base	Soma	Or	Mult	Soma	Or	Mult
Byte	2462944	2526092	2526092	2652156	2652156	2652380	2841596
Int	2715292	2841592	2778444	3031032	3094168	3220468	3599348
Float	3220696	12437600	xxxxx	10356164	12690176	xxxxx	10608751

MIPS ARDUINO

Tipo	MIPS	MIPS	MIPS	MIPS	MIPS	MIPS
	Constante	Constante	Constante	Variável	Variável	Variável
	Soma	Or	Mult	Soma	Or	Mult
Byte	15,835	5,28	5,27	5,28	2,62	2,60
Int	7,913	1,32	3,1670	2,7	1,98	1,19
Tipo	----------	----------	----------	----------	----------	----------
	MFLOPS	MFLOPS	MFLOPS	MFLOPS	MFLOPS	MFLOPS
Float	1,1314	xxxxxx	1,472	1,0694	xxxxxx	1,4278

Tabela CPI

	CPI	CPI	CPI	CPI	CPI	CPI
Tipo	Soma	Or	Mult	Soma	Or	Mult
Byte	10,13	3,59	3,13	3,05	2,252	6,2
Int	2,22	1,07	5,08	6,10	8,14	14,17
Float	14,34	xxxxxx	11	13,97	xxxxxx	11,15

Experiência 2

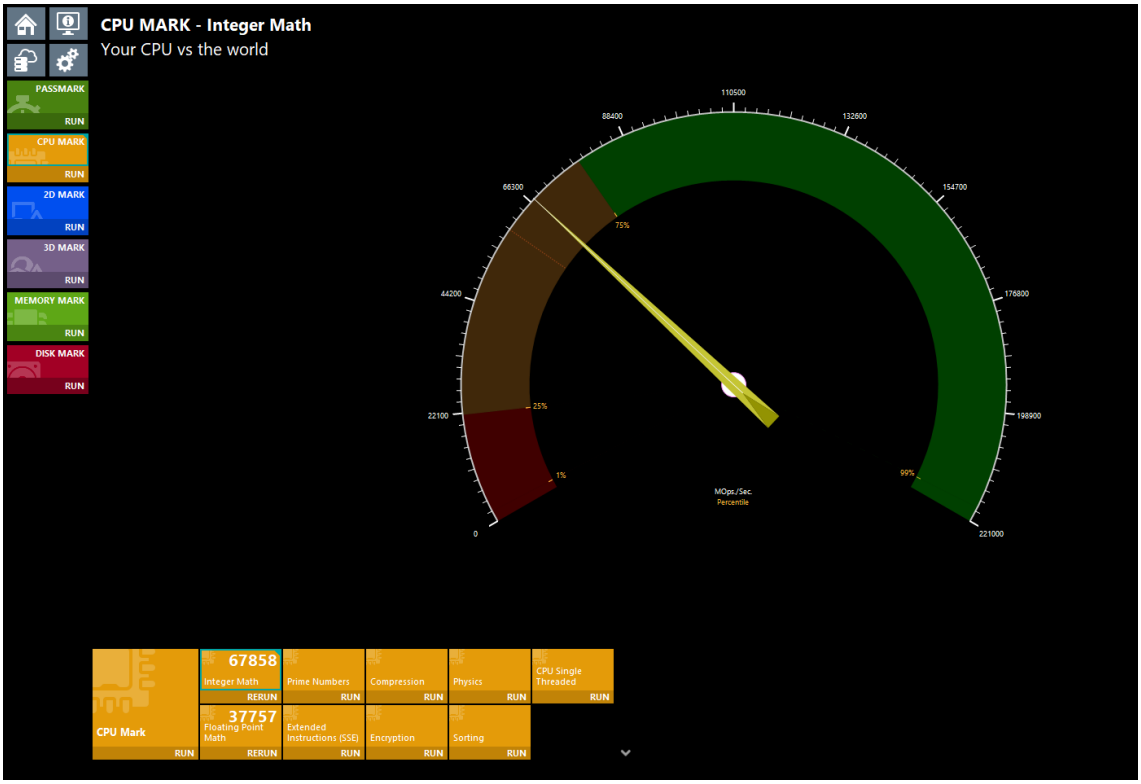
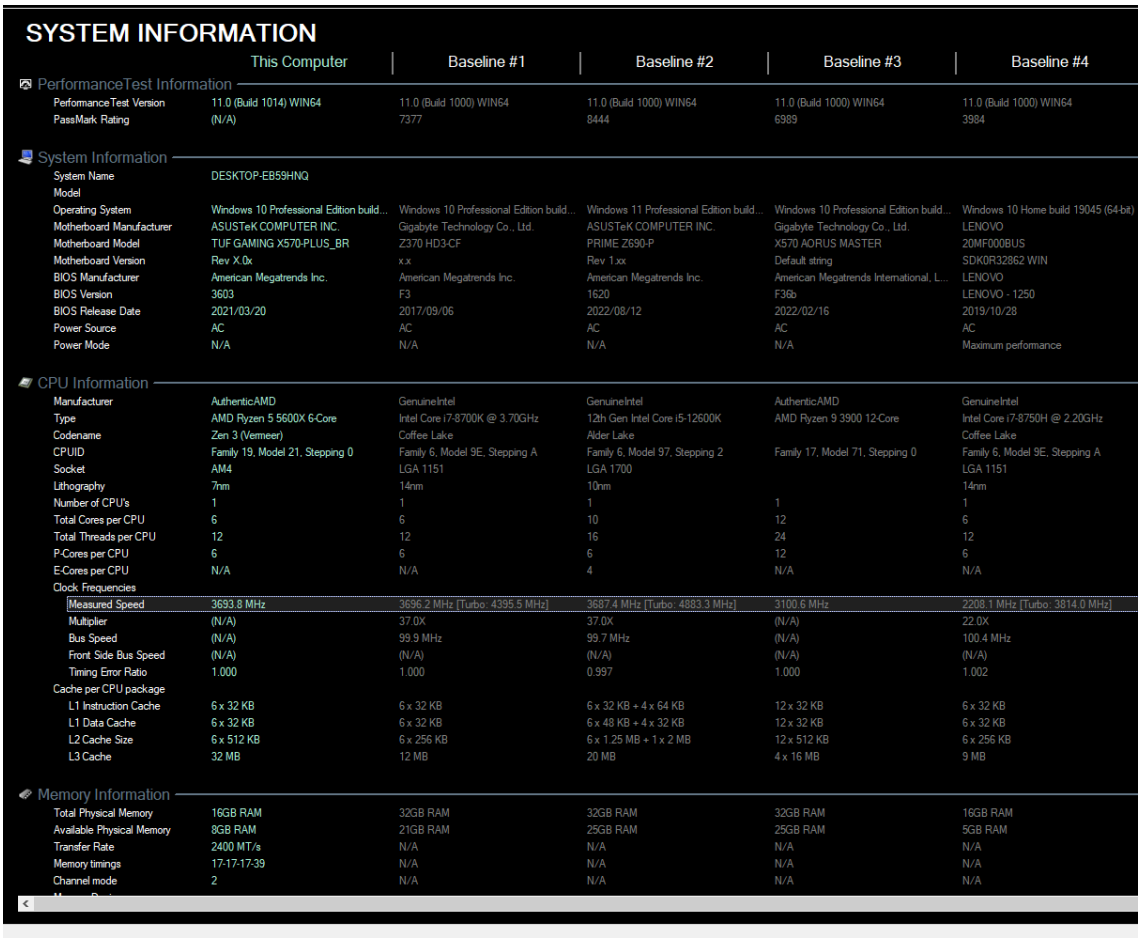


Tabela Programa em C

		I=i op 3	I=i op 3	I=i op 3	I = i op j	I = i op j	I = i op j
Tipo	Tempo Base	Soma	Or	Mult	Soma	Or	Mult
Char	13.5ms	19,3ms	14,9ms	13,9ms	34,2ms	17.5ms	31.3ms
Int	4,7ms	12,9ms	11.2ms	10,8ms	25,6ms	21,7ms	14,5ms
Float	51,9ms	79ms	xxxxx	82,2ms	54,6ms	xxxxxx	57,5ms

Tabela Mips(Meu PC)

	MIPS	MIPS	MIPS	MIPS	MIPS	MIPS
	Constante	Constante	Constante	Variável	Variável	Variável
Tipo	Soma	Or	Mult	Soma	Or	Mult
Char	1,714	6,666	20	480,78	2	558,65
Int	1,23	1,56	1,66	480,7	591,7	970,8
---	MFLOPS	MFLOPS	MFLOPS	MFLOPS	MFLOPS	MFLOPS
	Constante	Constante	Constante	Variável	Variável	Variável
Tipo	Soma	Or	Mult	Soma	Or	Mult
Float	369	xxxxx	331,125	3.703	xxxxx	1,818



SYSTEM INFORMATION

	This Computer	Baseline #1	Baseline #2	Baseline #3	Baseline #4
PerformanceTest Information					
PerformanceTest Version	11.0 (Build 1014) WIN64	11.0 (Build 1000) WIN64	11.0 (Build 1000) WIN64	11.0 (Build 1000) WIN64	11.0 (Build 1000) WIN64
PassMark Rating	(N/A)	7377	8444	6989	3984
System Information					
System Name	DESKTOP-EB59HNQ				
Model					
Operating System	Windows 10 Professional Edition build...	Windows 10 Professional Edition build...	Windows 11 Professional Edition build...	Windows 10 Professional Edition build...	Windows 10 Home build 19045 (64-bit)
Motherboard Manufacturer	ASUSTeK COMPUTER INC.	Gigabyte Technology Co., Ltd.	ASUSTeK COMPUTER INC.	Gigabyte Technology Co., Ltd.	LENOVO
Motherboard Model	TUF GAMING X570-PLUS_BR	Z370 HD3-CF	PRIME Z690-P	X570 AORUS MASTER	20MF000BUS
Motherboard Version	Rev X.0x	x.x	Rev 1.xx	Default string	SDK0R32862 WIN
BIOS Manufacturer	American Megatrends Inc.	American Megatrends Inc.	American Megatrends Inc.	American Megatrends International, L...	LENOVO
BIOS Version	3603	F3	1620	F36b	LENOVO - 1250
BIOS Release Date	2021/03/20	2017/09/06	2022/08/12	2022/02/16	2019/10/28
Power Source	AC	AC	AC	AC	AC
Power Mode	N/A	N/A	N/A	N/A	Maximum performance
CPU Information					
Manufacturer	AuthenticAMD	GenuineIntel	GenuineIntel	AuthenticAMD	GenuineIntel
Type	AMD Ryzen 5 5600X 6-Core	Intel Core i7-8700K @ 3.70GHz	12th Gen Intel Core i5-12600K	AMD Ryzen 9 3900 12-Core	Intel Core i7-8750H @ 2.20GHz
Codename	Zen 3 (Vermeer)	Coffee Lake	Alder Lake		Coffee Lake
CPUID	Family 19, Model 21, Stepping 0	Family 6, Model 9E, Stepping A	Family 6, Model 97, Stepping 2	Family 17, Model 71, Stepping 0	Family 6, Model 9E, Stepping A
Socket	AM4	LGA 1151	LGA 1700		LGA 1151
Lithography	7nm	14nm	10nm		14nm
Number of CPU's	1	1	1	1	1
Total Cores per CPU	6	6	10	12	6
Total Threads per CPU	12	12	16	24	12
P-Cores per CPU	6	6	6	12	6
E-Cores per CPU	N/A	N/A	4	N/A	N/A
Clock Frequencies					
Measured Speed	3693.8 MHz	3696.2 MHz [Turbo: 4395.5 MHz]	3687.4 MHz [Turbo: 4883.3 MHz]	3100.6 MHz	2208.1 MHz [Turbo: 3814.0 MHz]
Multiplier	(N/A)	37.0X	37.0X	(N/A)	22.0X
Bus Speed	(N/A)	99.9 MHz	99.7 MHz	(N/A)	100.4 MHz
Front Side Bus Speed	(N/A)	(N/A)	(N/A)	(N/A)	(N/A)
Timing Error Ratio	1.000	1.000	0.997	1.000	1.002
Cache per CPU package					
L1 Instruction Cache	6 x 32 KB	6 x 32 KB	6 x 32 KB + 4 x 64 KB	12 x 32 KB	6 x 32 KB
L1 Data Cache	6 x 32 KB	6 x 32 KB	6 x 48 KB + 4 x 32 KB	12 x 32 KB	6 x 32 KB
L2 Cache Size	6 x 512 KB	6 x 256 KB	6 x 1.25 MB + 1 x 2 MB	12 x 512 KB	6 x 256 KB
L3 Cache	32 MB	12 MB	20 MB	4 x 16 MB	9 MB
Memory Information					
Total Physical Memory	16GB RAM	32GB RAM	32GB RAM	32GB RAM	16GB RAM
Available Physical Memory	8GB RAM	21GB RAM	25GB RAM	25GB RAM	5GB RAM
Transfer Rate	2400 MT/s	N/A	N/A	N/A	N/A
Memory timings	17-17-17-39	N/A	N/A	N/A	N/A
Channel mode	2	N/A	N/A	N/A	N/A

FREQUENCIA: 3693.8MHz

Tabela CPI

Tipo	Soma	Or	Mult	Soma	Or	Mult
Char	1,467	6,7	1,34	5,23	10,4	4,79
Int	2,12	1,64	1,69	5,25	5,1	2,47
Float	6,36	xxxxx	7,57	7,7	xxxxx	1,84

Tabela Speed up

Identificação	Programa em C		Performance Test	
-------	Speed up (inteiros/FP)		Speed up (inteiros/FP)	
12th Gen Intel(R) Core(TM) i5	1	1	1	1
AMD Ryzen 5 5600x 6-Core	1.02	1.003	1.938	1.788

Tabela Speed up Sistema Operacional

Identificação	Programa em C		Speed up
Apple M1, 3200 MHz	Sonoma 14.4.1	Sistema operacional de 64 bits, Windows	1,484

Tabela Speed up Compilador

Identificação	Programa em C		Speed up
Intel® Core™ i5	Compilador Online de C	gcc (MinGW.org GCC-6.3.0-1) 6.3.0	0,540
AMD Ryzen 5 5600x 6-Core	Compilador Online de C	Gcc(MinGW.org GCC-6.3 0-1) 6.3.0	0,639

Tabela Speed up Máquina

Identificação	Programa em C		Speed up
2208.1 MHz, Windows	Inter® Core™ i5	AMD Ryzen 5 5600x 6-Core	1,183